

REMARKS

Claims 7-10, 12, 41, 42 and 44 are now pending in the application. Claims 1-6, 11, 13-40 and 43 have been cancelled, without prejudice. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

REJECTION UNDER 35 U.S.C. § 102; McWILLIAMS

Claims 7-12, 41, 42 and 44 stand rejected under 35 U.S.C. § 102(e) as being anticipated by McWilliams (U.S. Publication No. 2004/0233521). This rejection is respectfully traversed.

Independent Claim 1 recites, in part: “wherein said **automated routine** is **repeated, using a focal distance** of said image-capturing means **that is shifted** to a focal distance for a more telescopic side, **until the celestial object is introduced into a center of field in the captured image with a sufficient precision.**” Similarly, Independent Claim 10 recites, in part: “wherein said **automated routine** is **repeated, using a focal distance** of said image-capturing means **that is shifted** to a focal distance for a more telescopic side, **until said target celestial object is introduced into the center of a field in the captured image with a sufficient precision.**” As described in the specification, this automated routine provides a zooming-in in a step-by-step manner toward the telescopic side to finally obtain the satisfactory precision. See, paragraph [0132]. Whether the satisfactory precision has been met is determined by the apparatus as part of the automated process, e.g., when the elongation between the fundamental star and the center of the field falls under a threshold value (See, paragraph [0132]), when a focal distance exceeds a predetermined value (See,

paragraph [00131], and [0132]), and/or when the similarity in the comparison operation relative to the celestial object database exceeds a predetermined value (See, paragraph [00131]). Thus, by repeating the routine, a particular celestial object can be introduced into a center of field in the captured image with a very high precision in the alignment process.

In contrast, McWilliams discloses its alignment process in paragraph [0045] referring to Fig. 4, which is quite different. In McWilliams, a first bright star, a second bright star and another bright star are detected **in order to derive comparable angles** for recognizing the stars. See, paragraph [0045]. Thus, the McWilliams alignment process includes no automatic routine that is repeated for **a particular** celestial object, using a focal distance of said image-capturing means that is shifted to a focal distance for a more telescopic side, until that celestial object is introduced into a center of field in the captured image with a sufficient precision. In fact, the alignment process of McWilliams does not involve **repeatedly capturing** an image of **a single** celestial object, much less recapturing an image of the same celestial object at a shifted focal length as recited in the instant claims.

It is clear that McWilliams performs the alignment process **using** the first group of bright **stars only one time**. There is no repeated alignment process for the same group of bright stars in McWilliams. In contrast, the steps of the automated routine of the instant claims constituting the alignment process of the present invention are repeated **for the same** reference star (of course, the alignment process of the subject invention may be also performed for another reference star after the alignment process for the first reference star is completed). In addition, this automated routine is repeated for the same reference star using a focal distance of said image-capturing means that is

shifted to a focal distance for a more telescopic side, until said target celestial object is introduced into the center of a field in the captured image with a sufficient precision, none of which is disclosed or suggested by the alignment process of McWilliams. Thus, even if the vision device 30 of McWilliams has an auto zooming function, it would not have been obvious to those skilled in the art to repeat the steps of the alignment process for the same reference star with the focal distance of the vision device 30 being increased.

McWilliams also discloses that after completion of the alignment process, the processor may operate to center a specified star within the tube's field of view. Specifically, paragraph [0046] of McWilliams describes, "The processor 24 may fine tune the drive mechanism 18 to substantially center the specified star within the tube's 12 field of view using the vision device 30, as depicted in step 5d." However, there is no repeating routine for the same star in McWilliams. The process in paragraph [0046] is an introducing process, which does not directly relate to the alignment process in paragraph [0045] and in Fig. 5. In addition, McWilliams does not describe or suggest any repeating routine as part of this introducing process, much less a repeating routine where the focal distance of the vision device 30 is shifted to a focal distance for a more telescopic side. Even if the vision device 30 has an auto zooming function, it would not have been obvious to those skilled in the art to repeat the steps for process for automatically introducing the same specified star with the focal distance of the vision device 30 being increased as recited in the instant claims. In fact, nowhere in McWilliams is there any suggestion as to how a zooming function of the tube 12 or the vision device 30 is used in as part of any automated routine, or how any automated

zooming function provide a step-by-step **shifting of the focal distance for a more telescopic side** during each repetition of an automated routine.

For at least the reasons discussed above, Applicants respectfully assert that the inventions of each of independent Claims 1 and 10 are neither disclosed nor suggested by McWilliams. Since each of the remaining claims depends from one of these independent claims, directly or indirectly, Applicants respectfully assert that they are likewise patentable for at least the reasons discussed above.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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